<u>REMARKS</u>

Claims 6, 7, 20, and 21 are pending in the present application. In the Office Action of June 13, 2006, the Examiner rejected all claims. Applicant respectfully requests reconsideration based on the following remarks.

<u>Rejection Under 35 USC §101</u>

In paragraph 1 of the Office Action, the Examiner rejected claims 6, 7, 20, and 21 because the claimed invention is directed to non-statutory subject matter. More specifically, the Examiner contends that "the claimed subject matter does not provide a concrete result of analysis, nor does it provide a tangible result of analysis."

Applicant traverses the Examiner's argument that there is no concrete or tangible result. The Examiner must weigh determinations within section 2106 of the Manual of Patent Examining Procedure to reach a conclusion as to whether it is more likely than not that the claimed invention as a whole either falls outside of one of the enumerated statutory classes or within one of the exceptions to statutory subject matter. "After USPTO personnel identify and explain in the record the reasons why a claim is for **an abstract idea with no practical application**, then the burden shifts to the applicant to either amend the claim or make a showing of why the claim is eligible for patent protection" (emphasis added) (MPEP 2106 IV D, 2100-13).

Applicant respectfully submits that the Examiner has not demonstrated in the record the reasons why claims 6, 7, 20, and 21 are for an abstract idea with no practical application. The Examiner has stated that "a mathematical algorithm is claimed that outputs two different channels given an input signal wherein there is no claimed application of these output signals. The tangible requirement does not

necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing" (MPEP 2106 IV C 2 (2) b, 2100-12). Applicant's claimed invention does not claim all signals but rather addresses methods and apparatus that transform sound into electrical signals which are processed and subtracted to output frequency components. The Examiner has not demonstrated how the output of frequency components is an abstract idea with no practical application.

Similarly, the Examiner has contended that the claimed subject matter does not provide a concrete result of analysis. "The opposite of concrete is unrepeatable or unpredictable. Resolving this question is dependent on the level of skill in the art" (MPEP 2106 IV C 2 (2) c, 2100-12). The Examiner has not explained how the claimed invention would produce unrepeatable results.

Further, the Examiner has not shown that the analysis and output of frequency components preempts the use of one or more equations. When a claim applies a mathematical formula, for example, as part of a seemingly patentable process, the USPTO personnel must ensure that it does not in reality "seek[] patent protection for that formula in the abstract" (Diamond v. Diehr, 450 U.S. 175, 188-89 (1981) at 191). An inventor cannot patent a process that comprises every "substantial practical application" of an abstract idea, because such a patent "in practical effect would be a patent on the [abstract idea] itself" (Gottschalk v. Benson, 409 U.S. 63, 71-72, stressing that the patent applicants in that case did "not seek to preempt the use of [an] equation," but instead sought only to "foreclose from other the use of that equation in conjunction with all of the other steps in their claimed process.") (MPEP 2106 IV C 3, 2100-13). The Examiner has not shown how the claimed invention comprises every "substantial practical application."

The result of the analysis of the input signal in the claimed invention is the output of a plurality of frequency component signals. The output of the frequency component signals is a concrete and tangible product of the analysis. The output of the signals may be utilized in the signal processing system for various other applications, such as "speech recognition, source separation of audio signals and stream separation of audio signals." (*see* [0004]). As such, there is a tangible result having a claimed application. Applicant respectfully requests withdrawal of this rejection.

However, in order to clarify the claimed invention, claims 6, 20, and 21 have been amended to recite the output of the frequency component. In claim 6, an additional step has been added which includes "outputting the first frequency component and the second frequency component." Claims 20 and 21 have been amended to clarify that the first and second processors output the first and second frequency components.

Rejection Under 35 USC §102

In paragraph 3 of the Office Action, the Examiner rejected claims 6, 7, 20, and 21 as being anticipated by Carlson et al (USPN 4,674,125, hereinafter *Carlson*). Applicant traverses.

With respect to claim 6, the claim has been amended in order to clarify the claim. That is, the input signal is processed by a second low pass filter to produce a second low pass filtered signal, which is then subtracted from the input signal to derive a second frequency component. This process is shown and described in connection with FIG. 2 of the present Application.

In contrast, *Carlson* only shows a second filter processing the previous low pass filtered signal (G_{k-1}). The filtered signal (G_k) is then subtracted from the previous low pass filtered signal (G_{k-1}) to obtain an output (L_{k-1}). However, the next filter takes the previous filtered signal (G_k) as the input, not the original input signal. As such, *Carlson* does not anticipate claim 6.

Claim 20 recites having "a first processor configured to subtract the first low pass filtered signal from the input signal to derive a first frequency component; a second low pass filter configured to process the input signal and output a second low pass filtered signal; and a second processor configured to subtract the second low pass filtered signal from the first low pass filtered signal to derive a second frequency component."

As discussed above in connection with claim 6, Carlson does not contemplate using the input signal as the input into each and every low pass filter. Carlson takes the output of the previous low pass filter as the next input.

Furthermore, claim 20 and claim 21 both recite having a plurality of processors for performing the subtracting. That is, there is a first processor and a second processor for subtracting their respective low pass filtered signal from the

input signal. *Carlson* does not contemplate having a separate processor to perform each subtraction.

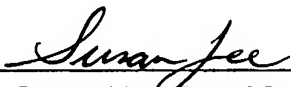For at least the reasons provided above, claims 20 and 21 are not anticipated by *Carlson*.

CONCLUSION

Based on the foregoing remarks, Applicant believes the rejections to the claims have been overcome, and that the present application is in condition for allowance. If the Examiner has any questions regarding the case, the Examiner is invited to contact Applicant's undersigned representative.

Respectfully submitted,

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